**Note Outline 22.2 – Earth-Moon-Sun System**

I. The two main motions of the Earth are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

A. Rotation:

i. results in \_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_.

ii. one complete rotation of Earth ≈ \_\_\_\_\_\_\_\_\_\_\_.

iii. 2 ways to measure Earth’s day:

a. Apparent Solar Day:

b. Sidereal Day:

Q. Why use solar day instead of sidereal day?

B. Revolution:

i. Earth revolves around the \_\_\_\_\_\_\_\_ in an elliptical orbit at an avg. speed of 107,000 Km/h (\_\_\_\_\_\_\_\_\_\_\_\_\_\_mi/h).

ii. Because of its elliptical orbit, Earth’s distance from the sun \_\_\_\_\_\_\_\_\_\_\_\_\_. At \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Earth is closest to the sun (≈Jan. 3), and at \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Earth is farthest from the sun (≈July 4).

iii. As Earth revolves, the sun appears to move among the backdrop of constellations or against the backdrop of the celestial sphere, along a path called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

iv. The projection of Earth’s equator onto the sky is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

II. Precession:

i. The period of precession, or the amount of time for the axis to complete one circle (wobble) is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ years.

ii. Along with orbital shape and tilt-of-axis variances, the motion of precession has a profound impact on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

iii. Due to precession, our north star will eventually be \_\_\_\_\_\_\_\_\_\_\_\_.